

REMARKS

Claims 1-14 are pending in the present application. The following remarks address the objections and rejections presented by the Examiner. The following response is intended to be fully responsive. No amendments or added claims are present in the application.

Objections to the Drawings

The drawings have been amended to comply with the Examiner's objections. Figure 2 has been amended to show the axle recited in claim 4. The objection concerning element 49 of figure 5 has been addressed by submitted an amended drawing with a correct numeral 52 as described in the specification. The objection concerning element 44 has been addressed by amending the specification to refer to elements 44a and 44b rather than an element 44. The objection concerning element 52 not being shown in the drawing has been addressed by correctly renumbering element 49 of figure 5 as element 52. The objection concerning element 64 not being shown has been addressed by adding a numeral 64 in figure 6 identifying a sealing means previously shown in the drawings. The amended drawings are believed to be in compliance with 37 CFR §1.121(d).

Objections to the Claims

The applicant respectfully submits changes to the objected claims in accordance with the Examiner's suggestions.

Applicant has carefully studied the outstanding Office Action. The present Response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of this application are respectfully requested. No new matter has been added by any of the amendments to the specification. Applicants respectfully request reconsideration and withdrawal of the Examiner's rejections in view of the foregoing amendments and following remarks.

CLAIM REJECTIONS - 35 U.S.C. § 102

Claims 1-3, 5-10, 12-13

The Examiner has rejected claims 1-3, 5-10, 12, and 13 as being anticipated by Pogorzelski (U.S. Patent No. 5,445,242). Regarding claims 1, 2, 5 and 6, the Examiner states:

Pogorzelski et al. show in figures 1, 2, and 4 a fluid cooled brake housing 35 including at least a casing defining a cavity for housing one or more friction pads 22, 26 as shown in figure 1 the casing having one or more walls, at least one of said walls provided with an internal fluid flow path 74, a fluid inlet labeled in figure 2 in fluid communication with the fluid flow path, and a fluid outlet labeled in figure 2 in fluid communication with the fluid flow path.

Claim 1 has been amended, such that “casing defining a cavity” has been changed to “casing defining a sealed cavity.” As a result of this amendment, Pogorzelski fails to anticipate every element of the amended claim, because Pogorzelski fails to teach a “sealed cavity.” Claims 2, 5, and 6 are directly or indirectly dependent on claim 1, and therefore incorporate the elements of claim 1. Pogorzelski’s failure to anticipate every element of claim 1 precludes a finding of anticipation with respect to claims 2, 5 and 6 as well as claims 3, 4, and 7.

Furthermore, claim 5 has been amended to state “A wall for a wet brake housing.” The Pogorzelski reference also fails to anticipate every element of the amended claim because Pogorzelski fails to teach “a wall for a wet brake housing.”

Regarding claims 3, 7 and 13, the Examiner states:

Pogorzelski et al. show in figure 4 wherein the fluid flow path includes a plurality of parallel connected channels (top and bottom horizontally extending portions 74) extending between the fluid inlet and the fluid outlet.

Claims 3 and 7 depend on claims 1 and 5 respectively. As explained previously, the amended claims 1 and 5 are no longer anticipated by Pogorzelski. Therefore, claims 3 and 7 are no longer anticipated.

Claim 13 is dependent on claim 8 which will subsequently be shown to be in allowance

after the amendments to the claims and therefore claim 13 is not anticipated by Pogorzelski.

Regarding claims 8 and 12, the Examiner states:

Pogorzelski et al. show in figures 1, 2, and 4 a fluid cooled brake system including a fluid cool brake housing 34 having a casing defining a cavity, the casing having one or more walls, at least one of the walls provided with an internal fluid 74 flow path, and a fluid inlet and outlet each in fluid communication with the fluid flow path as shown in figure 2, one or more brake pads 22, 26 disposed in the cavity as shown in figure 1, braking surface or [sic] the outer surface of 16 located within the cavity as shown in figure 1, an actuator 20 for selectively moving the one or more pads into contact with the braking surface, and a supply 14 of cooling fluid external of the cavity and the fluid in communication with the fluid inlet, fluid flow path and fluid outlet.

Claim 8 has been amended in a manner similar to claim 1 wherein “cavity” has been changed to “sealed cavity” Pogorzelski fails to disclose a “sealed cavity.” Claim 8 is therefore not anticipated by the Pogorzelski reference. Claim 12 is dependant on claim 8 and is not anticipated on the same grounds presented earlier.

CLAIM REJECTIONS – 35 U.S.C. §103(a)

Claims 4, 11, and 14

Claims 4, 11, and 14 are allowable in view of the preceeding arguments with respect to claims 1 and 8. Claims 1 and 8 are not anticipated by Pogorzelski, and the Examiner, thus far, has failed to show a sealed cavity. Claims 4, 11, and 14 are dependant on claims 1 and 8 are therefore allowable in view of the amendments absent any further rejections from the Examiner.

Furthermore, assuming, *arguendo*, claims 1 and 8 as amended were anticipated by Pogorzelski, claims 4, 11, and 14 are not obvious. The Examiner rejected claims 4, 11 and 14 under 35 U.S.C. §103(a), as being unpatentable over Pogorzelski et al. in view of Emmons (U.S. Patent No. 5,249,649). The Examiner has stated that:

Re: claims 4 and 14. Pogorzelski et al. lack the limitation of a sealing means for sealing the cavity when the housing is mounted on an axle to provide a wet brake housing. Emmons teaches in figure 7 the use of a sealing means 64 for sealing the cavity from the volume of fluid to actuate the piston. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pistons actuating the

friction pads of Pogorzelski et al. to have included sealing means, as taught by Emmons, in order to provide a means of helping to separate the actuating fluid used to actuate the pistons to move the friction pads from the rest of the cavity.

The sealing means shown in Emmons is not the same type of sealing means of the present invention. In fact, the sealing means of the present invention has a completely different use and function. Figure 6 shows an exemplar of the present invention. The sealing means 64 and 66 prevent the loss of fluid 62 contained in the cavity 14 from escaping from the interior of the housing 10 to the outside environment. In Emmons, the Examiner points to element 65, a sleeve, in figures 6 and 7 as a “sealing means.” Emmons states:

Bonded or molded over piston 61 is a sleeve 65 of an elastomeric material, such as rubber or plastic. Said sleeve includes a back wall 66 which is cemented on bonded to and extends over rear wall 63 of piston 61.

The sleeve in the Emmons reference is intended to seal between the piston and the cylinder 53 as shown in Figures 3, 6, and 7. It does not “seal[] the cavity when the housing is mounted on an axle” In the present invention, the sleeve of Emmons would be analogous to a component between the piston 17 and the cylinder 19, shown in Figure 6 of the present invention, designed to assist in the actuation of the piston, not sealing the housing and the wheel hub 57 to prevent leakage of the fluid 62. The sealing means in Figure 6 are shown by rotary seals 64 and 66.

For this reason, Pogorzelski in view of Emmons fails to teach the present invention because neither invention suggests a “sealing means for sealing the cavity when the housing is mounted on an axle.” The applicant respectfully requests withdrawal of the rejection, and allowance of the claims.

Regarding claim 11, the Examiner states:

Re: claim 11. See the rejection of claims 4 and 14 above and Examiner notes that a volume of fluid shown behind the piston 20 within the cavity and at least partially covering the braking surface (at least that portion of the braking surface in the area extending the width of the volume of fluid behind the piston 20) is shown separate from the cooling fluid.

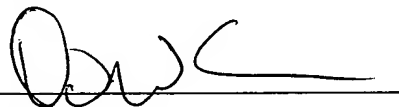
The Applicant assumes that piston 20 refers to the Pogorzelski reference. Given the above explanation of the differences between the “sealing means” in the present invention and the “sleeve” in Emmons, the applicant believes the previous remarks are sufficient to traverse the rejection of claim 11.

CONCLUSION

Applicants have adopted the Examiner's suggestions and believes the claims are in condition for allowance. It is respectfully urged that the subject application is patentable over references cited by Examiner and is now in condition for allowance. Applicants request consideration of the application and allowance of the claims. If there are any outstanding issues that the Examiner feels may be resolved by way of a telephone conference, the Examiner is cordially invited to contact David W. Carstens at 972.367.2001.

The Commissioner is hereby authorized to charge any additional payments that may be due for additional claims to Deposit Account 50-0392.

Respectfully submitted,

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Amendments to the Drawings:

The attached sheet of drawings includes changes to Figures 2, 5, and 6. In Figure 2, previously omitted axle (identified as -30-) is added. Due to the change in the drawing, the “hole”, previously identified as -30- is no longer shown. The specification has been duly updated to reflect the change. The addition is supported in the previously filed specification. In Figure 5, -49- is changed to -52-. In Figure 6, element -64- has been identified.

Attachment: Replacement Sheet

Annotated Sheet Showing Changes

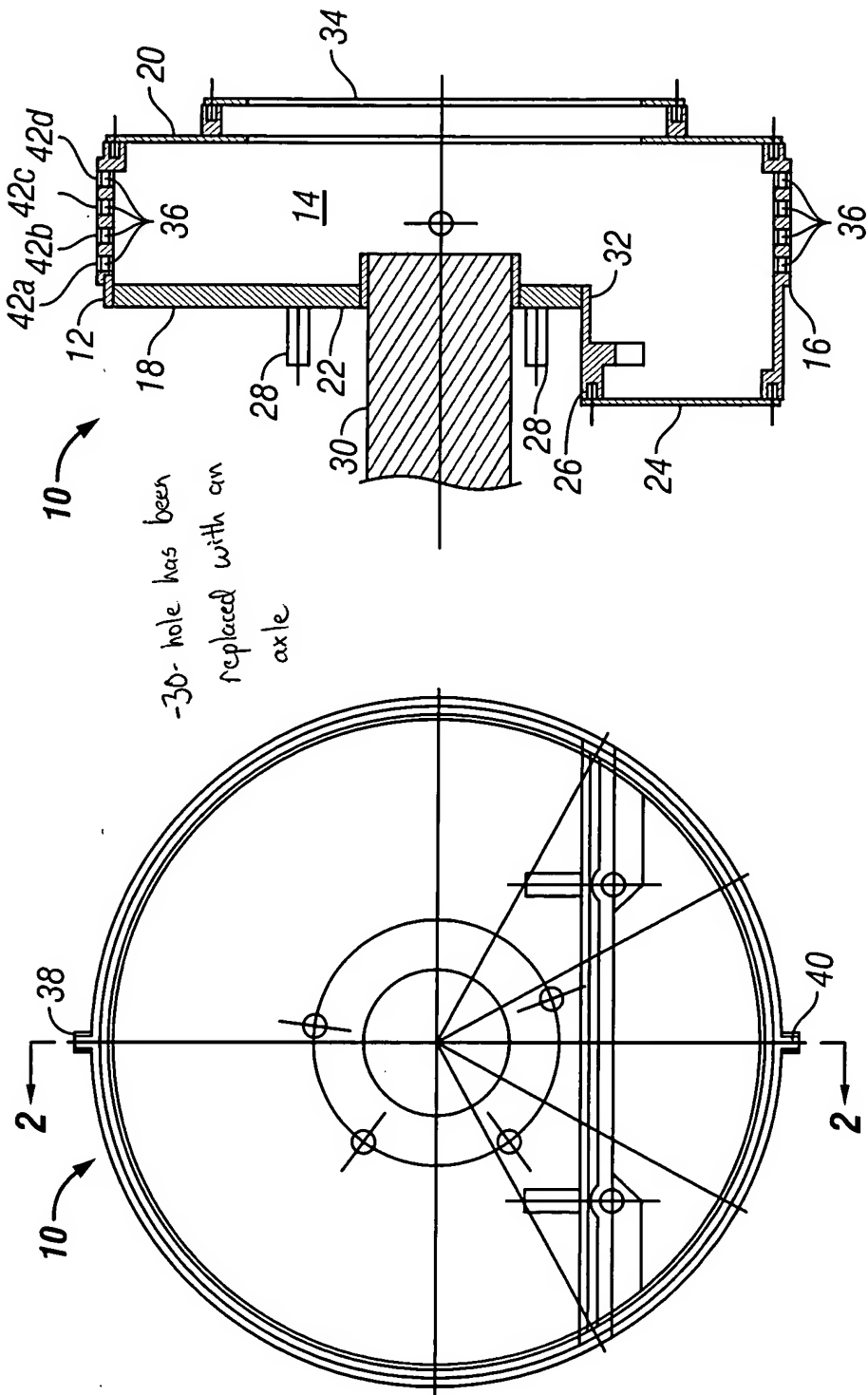


FIG. 2

FIG. 1

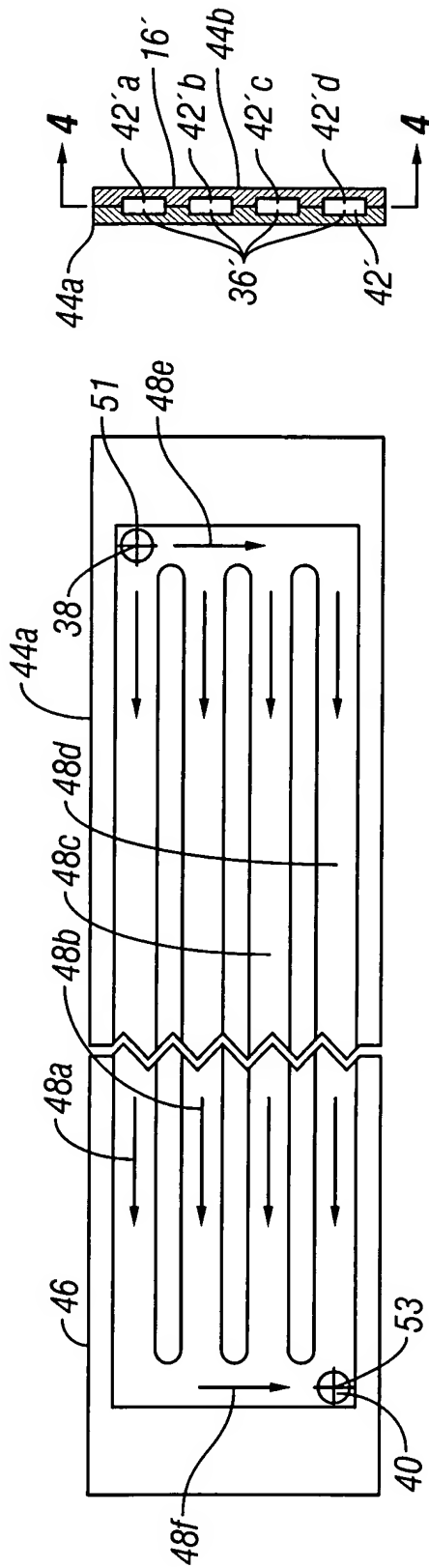


FIG. 4

FIG. 3

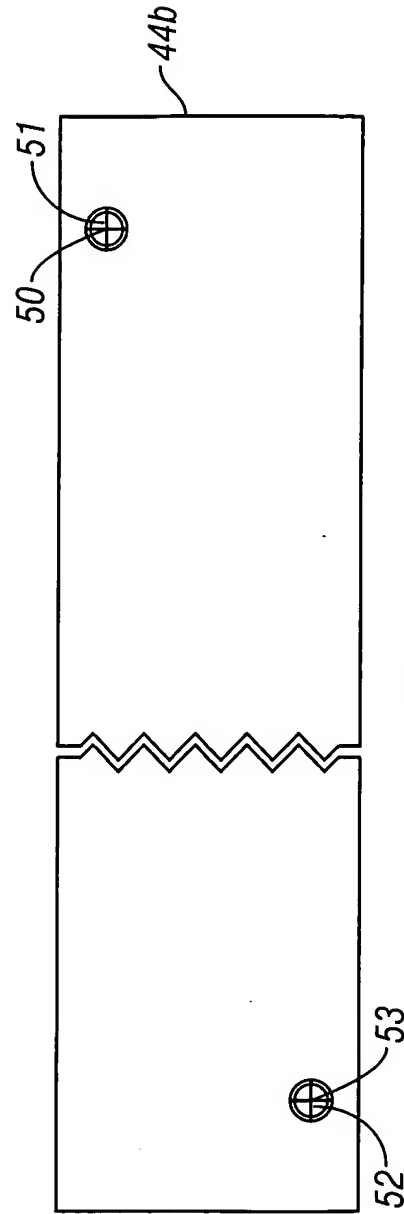


FIG. 5

changed from -49- to -52-

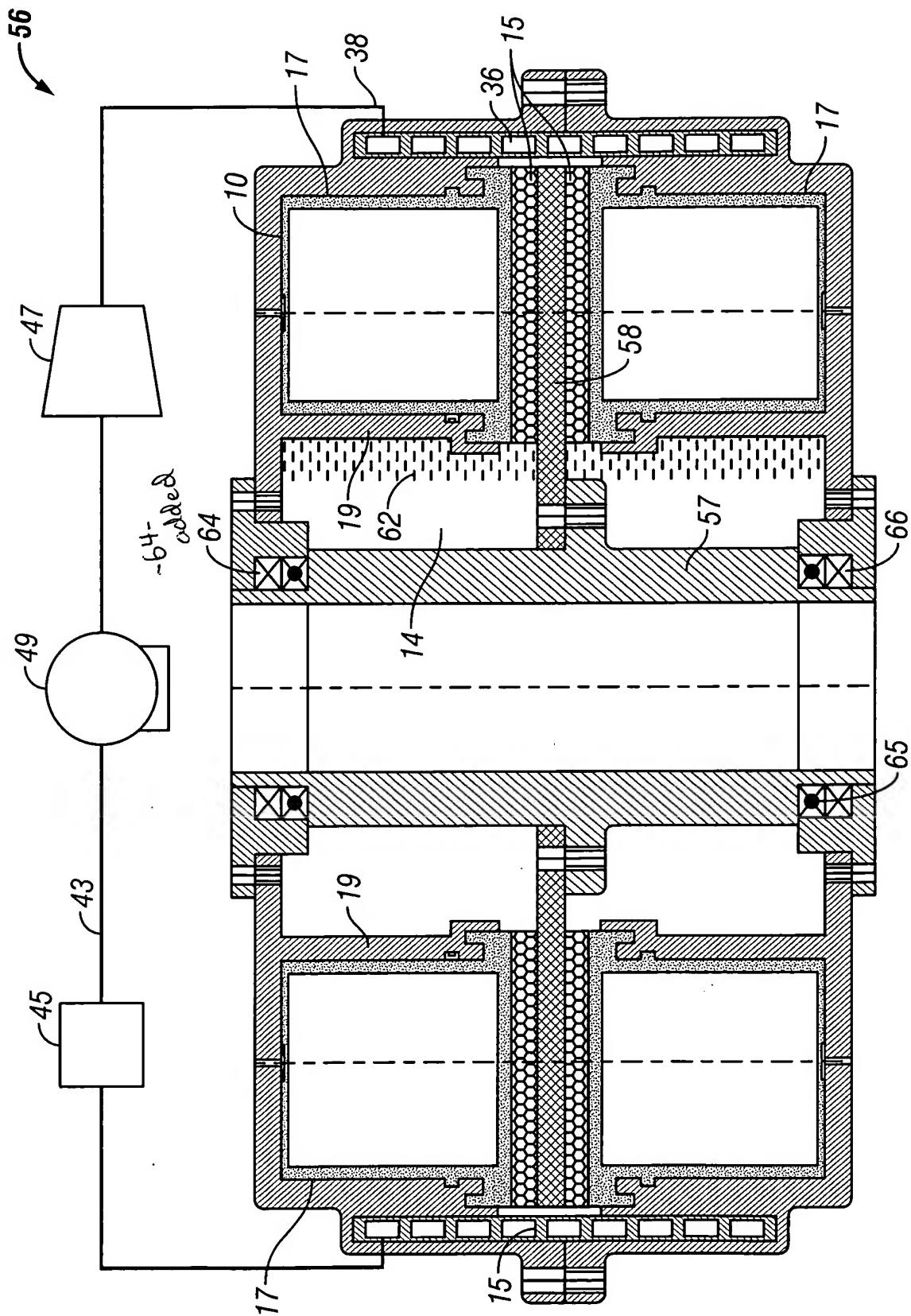


FIG. 6